



# ILLINOIS COMMERCE COMMISSION

August 26, 2003

State of Illinois, Department of Transportation,  
Petitioner,

Vs.

Norfolk Southern Railway Company, City of Belleville,  
Respondents.

T03-0087

Petition (1) to install a presignal on the southwest bound approach of Lebanon Avenue northeast of the at-grade crossing of Norfolk Southern Railway Company single main line track and to increase the amount of minimum pre-emption time provided by Norfolk Southern Railway Company to the Department for the traffic signal preemption sequence at said at-grade crossing located in the City of Belleville.

Ms. Stacey C. Hollo  
Illinois Department of Transportation  
2300 S. Dirksen Parkway  
Springfield, IL 62764

Dear Ms. Hollo:

Receipt is acknowledged of the original and three (3) copies of the Petition filed August 25, 2003 in the above matter.

**All future correspondence/pleadings should be filed with an original and three (3) copies and addressed to: Mr. Dave Lazarides, Acting Director of Processing, Illinois Commerce Commission, 527 E. Capitol Avenue, Springfield, IL 62701.**

Processing and Information Section

kl

cc: Mr. Victor A. Modeer, IDOT  
Mr. Thomas Ambler, NS  
Mr. Richard Boyle, NS  
Mr. Rick Ray, NS  
City of Belleville, Mayor/Clerk

Illinois Commerce Commission  
RAIL SAFETY SECTION

AUG 25 2003

Avenue by mounting the highway traffic signal head (presignal) on the railroad cantilever signal arm as depicted in the plans attached hereto as Exhibit 4.

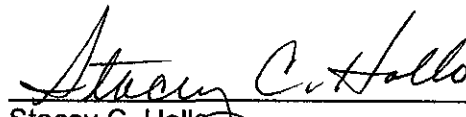
8. That the Illinois Commerce Commission has jurisdiction to approve and order that requested changes pursuant to the Illinois Commercial Transportation Law (625 ILCS 5/18c-7401) and the Illinois Administrative Code (92 Ill. Adm. Code 1535 et seq.).
9. The Department does not agree to accept service by electronic means.

NOW THEREFORE, Petitioner, Illinois Department of Transportation, prays that the Illinois Commerce Commission order, in accordance with its authority the following:

1. That a hearing be held at the Commission's offices in Springfield, Illinois, within 70 days of this filing;
2. That a notice be issued directing the Norfolk Southern Railway Company to submit detailed estimates of cost and general layout plans for the proposed improvements at least 14 days prior to the scheduled hearing to the Department and Commission staff;
3. That the Norfolk Southern Railway Company provide to the Department a minimum simultaneous preemption time of 25 seconds at the Lebanon Avenue at-grade crossing in the City of Belleville for its traffic signal preemption sequence;
4. That the Department install a presignal on the southwest bound approach of Lebanon Avenue as proposed by the Department;
5. That the costs associated with the requested changes be apportioned fairly and reasonably between the parties.

Respectfully submitted,  
ILLINOIS DEPARTMENT OF TRANSPORTATION

By: Lisa Madigan  
Attorney General

  
\_\_\_\_\_  
Stacey C. Hollo  
Special Assistant Attorney General 43

Dated August 20, 2003

Illinois Department of Transportation  
2300 South Dirksen Parkway, Room 311  
Springfield, Illinois 62764  
Telephone (217)782-3215

Counsel for the Illinois  
Department of Transportation

## PROOF OF SERVICE

The undersigned hereby certifies that a copy of the foregoing instruments were served upon the addressees listed below by mailing a true and correct copy via first class mail, postage pre-paid and depositing the same in the United States Mail, Springfield, Illinois, this 20th day of August, 2003:

A handwritten signature in cursive script, reading "Linda Bumgarner", written over a horizontal line.

Norfolk Southern Railway Company  
Richard E. Boyle  
5000 West Main St., Box 899  
Belleville, IL 62223

Linda Fields  
City Clerk  
101 S. Illinois St.  
Belleville, IL 62220

Mark A. Kern  
Mayor  
101 S. Illinois St.  
Belleville, IL 62220

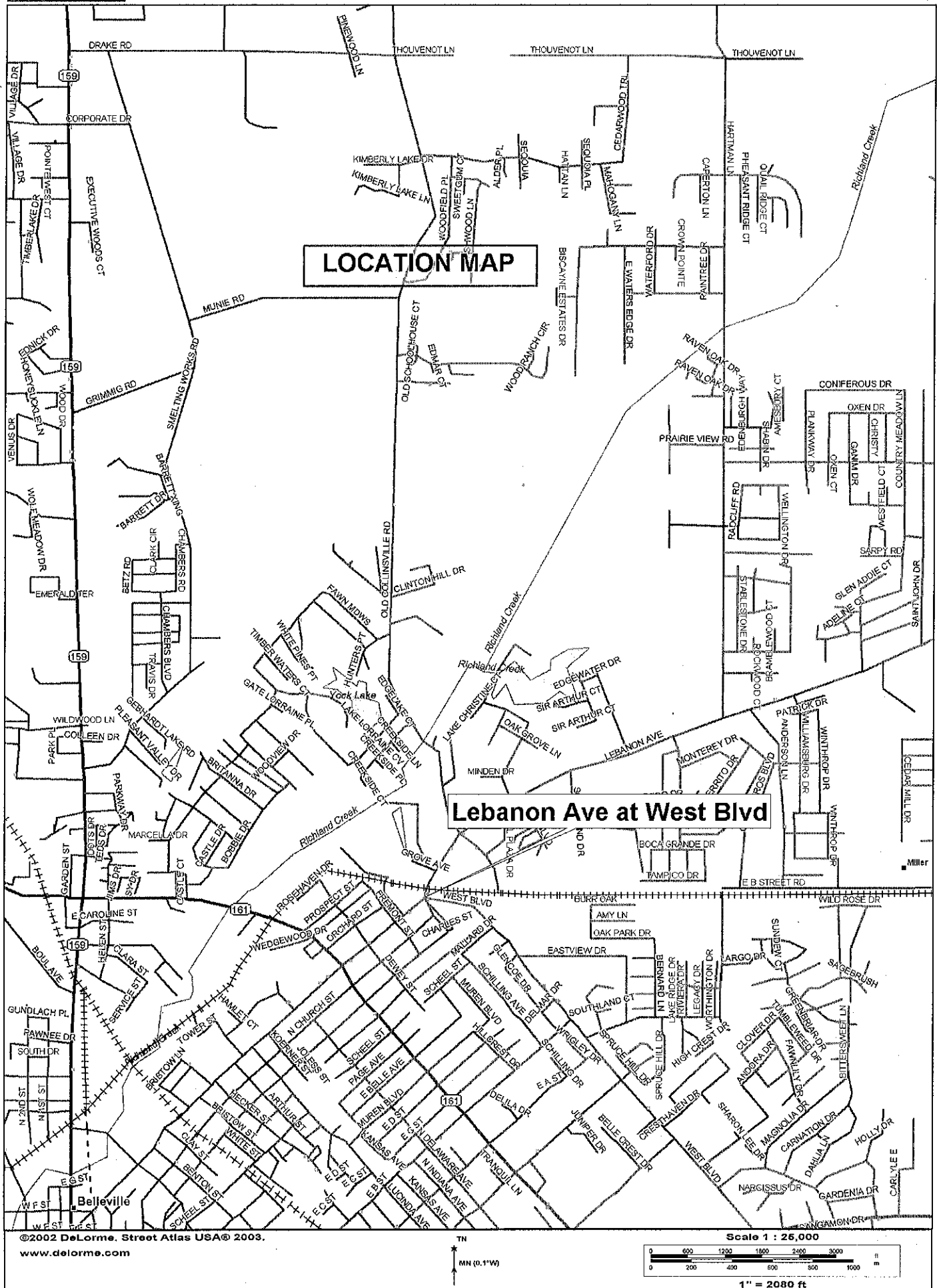


Exhibit 1

## Lebanon Avenue

### PROPOSED MINIMUM PREEMPTION TIME

	TIME NEEDED
Delay	1
Minimum Green (sec)	1
Yellow Interval (sec)	4.5
All Red Interval (sec)	1.0
Maximum Time Prior to Track Clear Phase	7.5
Track Clearance (sec)	8.5
Separation Time	9.0
Min. RR Warning Time Required (Total seconds)	25

# PROCEDURE FOR ESTABLISHING MINIMUM PREEMPTION TIMES AT INTERCONNECTED CROSSINGS

PHASE I	PHASE II	PHASE III
Clearance Interval	Queue Clearance	Separation Time Safety Factor
<p>(This is a set time within the traffic signal controller which reflects the maximum worst case time it will take for the signal on the track approach to get a green light.)</p> <p><b>FACTORS:</b></p> <ul style="list-style-type: none"> <li>• pedestrian signal phase</li> <li>• vehicle clearance phase</li> </ul>	<p>(This is a variable time which reflects the amount of time required to clear a vehicle to a point beyond the tracks.)</p> <p><b>FACTORS</b></p> <ul style="list-style-type: none"> <li>• storage area length</li> <li>• crossing geometrics</li> <li>• queue length</li> <li>• distance between track and intersection</li> </ul>	<p>(This is a fixed time of 9 seconds which is needed to compensate for a variety of variables outside of the Department's control.)</p> <p><b>FACTORS</b></p> <ul style="list-style-type: none"> <li>• weather</li> <li>• vehicle defects</li> <li>• motorist reaction</li> <li>• motorist behavior</li> <li>• busses/large trucks hauling hazardous cargo</li> <li>• time of day</li> </ul>

The minimum preemption time at interconnected crossings consists of the following three components:

1. The clearance interval phase is the maximum worst case time it will take for the traffic signal to clear to a green light for the track approach. It is the Department's policy to get to this green as quickly as possible by immediately terminating any pedestrian WALK indications, abbreviating the pedestrian clearance interval and running it concurrently with the vehicular clearance phase on the cross street. Local agencies should be notified of this abbreviated time to ensure it does not conflict with designated school routes or other conditions. This time will include a 1 second delay upon receiving the signal from the railroad to limit the number of false calls received, a 1 second minimum green for the through movement, the amber clearance, and any all red time included in the timing sequence.

2. The queue clearance phase is the amount of time required to clear a vehicle that has fouled the stop bar, located prior to the tracks, to a point either completely through the intersection, for storage areas less than 15 m (50 ft) or to a point where the rear of the vehicle is 1.83 m (6 ft) from the near rail



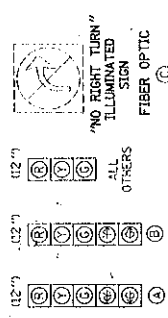
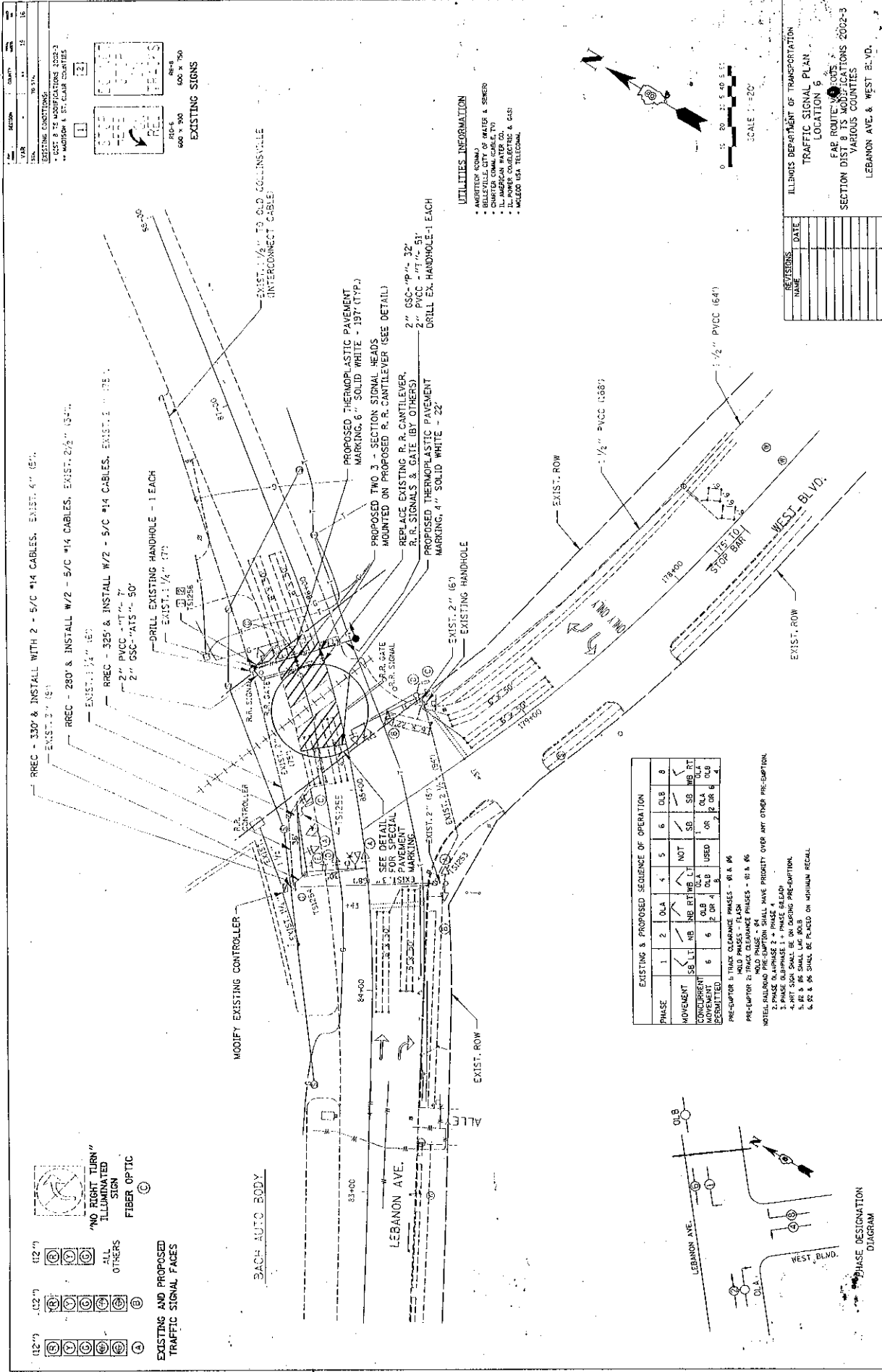
for longer storage areas. This time should be determined by field observations conducted in the manner described below in the section captioned "Data Collection."

3. The separation time safety factor phase is an amount of time added to ensure that a vehicle is not just clearing the tracks as the train enters the crossing. This is important to keep both the motorist and the engineer from taking emergency actions. This time has been fixed at 9 seconds.

- Data collection: Field measurements of queue clearances are taken for three hours during times of peak flow to determine the length of the queue clearance phase. The resultant field surveys also note for consideration any conditions which may delay queue clearance, such as heavy pedestrian crossing volumes and pedestrian violations of signal indications. If during the observation period, queues do not get past the tracks and foul the stop bar located prior to the tracks, then data collected from similar locations is used. Factors taken into consideration when choosing another location due to a lack of queuing, include, but are not limited to, similar traffic conditions, geometrics, approach grades, and storage distances.

The following table is completed for each minimum preemption time calculated:

Delay	1 sec
Minimum Green	1 sec
Yellow Interval	sec
All Red Interval	sec
Max. Time Prior to Track Clear Green (Clearance Interval)	sec
Track Clear Green (Queue Clearance)	sec
Separation Time	9 sec
Minimum Preemption Time Required	sec

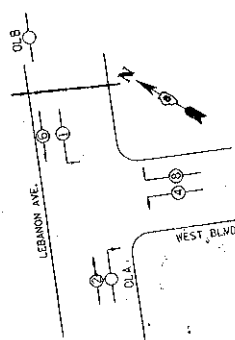


EXISTING AND PROPOSED TRAFFIC SIGNAL FACES

EXISTING & PROPOSED SEQUENCE OF OPERATION

PHASE	1	2	OLA	4	5	6	OLA	8
MOVEMENT	SB LT	NB	NB RT	WB LT	SB	SB	SB	WB RT
CONCURRENT	6	6	OLA	OLA	1 OR 2	1 OR 2	OLA	OLA
PERMITTED	6	6	2 OR 4	2 OR 4	1 OR 2	1 OR 2	OLA	OLA

- PRE-EMPTION: 1. TRUCK CLEARANCE PHASES - 9 & 6
- PRE-EMPTION: 2. TRUCK CLEARANCE PHASES - 10 & 6
- NOTES: 1. ALL PHASES SHALL HAVE PRIORITY OVER ANY OTHER PRE-EMPTION
- 2. PHASE 6, PHASE 2 & PHASE 4
- 3. PHASE 6, PHASE 2 & PHASE 4
- 4. 1ST SIDE SHALL BE ON DURING PRE-EMPTION
- 5. 2ND SIDE SHALL BE ON DURING PRE-EMPTION
- 6. 3RD & 4TH SHALL BE ON DURING PRE-EMPTION



PHASE DESIGNATION DIAGRAM

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TRAFFIC SIGNAL PLAN  
LOCATION 6  
F&P ROUTE 2002-3  
SECTION DIST 8 ITS MODIFICATIONS 2002-3  
VARIOUS COUNTIES  
LEBANON AVE. & WEST BLVD.